

PHILADELPHIA ELECTRIC COMPANY

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V. S. BOYER
VICE-PRESIDENT

October 1, 1973

Dr. D. F. Knuth, Director
Directorate of Regulatory Operations
United States Atomic Energy Commission
Washington, D.C. 20545

Subject: Significant Deficiency Report -
High Pressure Service Water Valve Weld Failure
Peach Bottom Atomic Power Station - Units 2 & 3
AEC Construction Permit Nos. CPPR-37 and CPPR-38
File: QUAL 2-10-2 SDR No. 5

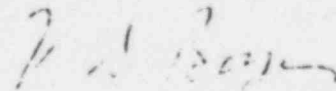
Dear Dr. Knuth:

In compliance with 10CFR50.55, paragraph (e) attached is the Significant Deficiency Report concerning the weld failure on the High Pressure Service Water valve in Unit No. 2. This item was reported to AEC DRO I by telecon on June 1, 1973.

We trust that this satisfactorily resolves this item. If further information is required, please do not hesitate to contact us.

We appreciate your extending the time for our response to October 1, 1973 as agreed by telecon on September 14, 1973 between our Mr. G. R. Hutt and Mr. R. Heischmann, USAEC DRO I.

Sincerely,



Copy to: J. P. O'Reilly, USAEC

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SIGNIFICANT DEFICIENCY REPORT - SDR NO. 5

HIGH PRESSURE SERVICE WATER VALVE WELD FAILURE

PEACH BOTTOM ATOMIC POWER STATION - UNITS 2 & 3

AEC CONSTRUCTION PERMIT NOS. CPPR-37 AND CPPR-38

Description of Deficiency

During a routine walk-thru of Unit No. 2 plant by the licensees operating personnel, a 12 inch - 300 pound motor operated globe valve in the High Pressure Service Water line on the discharge side of one Residual Heat Removal heat exchanger was discovered to have experienced a weld failure. The failure occurred between the valve yoke and the motor operator mounting plate. The reason for the failure has been identified as insufficient fillet weld throat dimension caused by the installation of unauthorized shims between the yoke legs and the mounting plate, which reduced the effective size of the weld.

Corrective Action

The failed valve is one of a series of eight valves (four in Unit 2 and four in Unit 3). These eight valves were visually inspected and a second valve was found to have cracks in the yoke to motor operator mounting plate weld.¹ All eight valves were returned to the vendor for rework. The rework involved elimination of the shims in the failed valve and the rewelding of the mounting plates to the yoke legs with full penetration welds on all eight valves.

An investigation of similar valves (supplied by the same vendor) elsewhere in the plant, was undertaken. A total of 108 valves were identified by the vendor to have yoke to motor operator mounting plate construction similar to that of the failed valve. Fifty-eight (including the above mentioned eight) of these valves are nuclear valves classified as Group II as defined by Figure A.2.1 of Appendix A of the Peach Bottom Atomic Power Station FSAR. The remaining valves are Group III non-nuclear balance of plant valves.

The Vendor's weld stress analysis calculations were reviewed and a table of acceptable weld sizes prepared.

¹ This valve was originally reported in the interim report to have shims. The valve was only visually inspected at that time and the cracks were interpreted to indicate the presence of shims.